Notice of Allowability	Application No.	Applicant(s)	
	10/774,204	MADDEN, JAMES WILLIAM	
	Examiner	Art Unit	
	Flemming Saether	3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Examiner's Amendment 5-12-05*.

2. ☒ The allowed claim(s) is/are *18,19,22-24,30,32,33,35-38 and 2628*.

3. ☒ The drawings filed on *05 February 2004 and 07 March 2005* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Edward Sherman on 5-12-05.

The application has been amended as follows: replaced the claims with the claims as follows:

[c18] A fastener comprising;

a) a plate having

i) a substantially planar lower surface,

ii) an upper surface opposing said lower surface,

b) a polygonal shaped cavity of uniform lateral cross-section along its axial length extending downward from the upper surface toward the lower surface of said plate for receiving in mated engagement a non-circular portion of a bolt selected from the group consisting of a bolt head and a nut,

c) a circular bore extending upward from said lower surface to penetrate a portion of said central cavity, being co-axially disposed thereto such that the non-circular portion of a bolt is retained in said cavity with the shaft of the bolt extending through said circular bore,

d) a peripheral region disposed between the edge of the fastener and the central bore wherein said peripheral region of the fastener is thinner than the portion of the fastener adjacent said cavity,

e) two or more holes disposed in said peripheral region extending between the upper and lower surface to secure the fastener to an object in contact with the lower surface thereby preventing rotation about said circular bore

f) wherein the fastener is thinner in regions circumscribing each of said holes than in the region adjacent said cavity, and each of said holes is separated from an adjacent hole by a rib.

[c19] A fastener according to claim 18 wherein said holes are equally spaced about the periphery of the circular bore between the edge of the fastener and said cavity.

[c20] (cancelled)

[c21] (cancelled)

[c22] A fastener according to claim 18 wherein the ribs taper in thickness from the portion of the fastener adjacent to said cavity toward the thinner peripheral region adjacent each hole.

[c23] A fastener according to claim 18 wherein the portion of the area around each hole adjacent to said cavity is a flat area bounded by an arc connecting each of the adjacent ribs.

[c24] A fastener according to claim 18 wherein the polygonal shape has six sides.

[c25] (cancelled)

[c26] A fastening system comprising;

a) a bolt comprising a threaded shaft terminated by a non- circular head,

b) at least one annular plate having;

i) a substantially planar lower surface,

ii) an upper surface opposing said lower surface,

iii) a polygonal shaped cavity of uniform lateral cross-section along its axial length extending downward from the upper surface toward the lower surface

of said plate for receiving in mated engagement the non-circular head of said bolt,

iv) a circular bore extending upward from said lower surface to penetrate a portion of said central cavity, being co-axially disposed thereto such that the non-circular portion of a bolt is retained in said cavity with the shaft of the bolt extending through said circular bore,

v) a peripheral region disposed between the edge of the annular plate and the central bore wherein said peripheral region of the fastener is thinner than the portion of the annular plate adjacent said cavity,

vi) two or more holes disposed in said peripheral region extending between the upper and lower surface to secure the annular plate to an object in contact with the lower surface thereby preventing rotation about said circular bore,

vii) wherein said annular plate is thinner in regions circumscribing each of said holes than in the region adjacent said cavity and each of said holes is separated form an adjacent hole by a rib,

c) a nut disposed on the threaded shaft to grasp one or more objects or structures disposed between the nut and bottom planar surface of said annular shaped member,

d) whereby the securing of said annular shaped member to the object precludes axial rotation about the threaded shaft and prevents the non-circular head from rotating as the nut is advanced along the threaded shaft to secure the object.

[c27] A fastening system according to claim 26 further comprising a second annular plate disposed on the opposite end of the shaft between said nut and said first annular plate for receiving said nut in the polygonal shaped cavity thereof such that securing the second annular plate to the opposite side of the fastened object via ~~the~~ said two or more holes precludes the loosening of said nut after tightening.

[c28] A fastening system according to claim 26 wherein said two or more of holes of said annular plate are equally spaced about the periphery of the circular bore between the edge of said annular plate and the cavity therein.

[c29] (cancelled)

[c30] A fastening system according to claim 26 wherein the ribs of said annular plate taper in thickness from the portion of the fastener adjacent to said cavity toward the thinner peripheral region adjacent each hole.

[c31] (cancelled)

[c32] A fastening system comprising:

a) a bolt comprising a threaded shaft terminated by a non-circular head,

b) a mating nut disposed about the threaded shaft,

c) a first and second annular shaped member that comprises

i) a plate having

(1) a substantially planar lower surface,

(2) an upper surface opposing said lower surface,

ii) a polygonal shaped cavity of uniform lateral cross-section along its axial length extending downward from the upper surface toward the lower surface of said plate for receiving in mated engagement either the non-circular head of said bolt or said nut,

iii) a circular bore extending upward from said lower surface to penetrate a portion of said central cavity, being co-axially disposed thereto such that for

(1) the first annular shaped member, the non-circular portion of the bolt is retained in said cavity with the shaft of the bolt extending through said circular bore, and

(2) for the second annular shaped member, the nut is retained in said cavity with the threaded end of said shaft extending through said circular bore,

iv) a peripheral region disposed between the edge of the plate and the circular bore wherein said peripheral region of the plate is thinner than the portion of the plateadjacent said cavity,

v) two or more holes disposed in said peripheral region extending between the upper and lower surface to secure the plate to an object in contact with the lower surface thereby preventing rotation about said circular bore,

vi) wherein said plate is thinner in regions circumscribing each of said holes than in the region adjacent said cavity and each of said holes is separated from an adjacent hole by a rib extending from the central cavity to the periphery of the plate,

d) wherein the substantially planar surface of said first annular shaped member is disposed facing the substantially planar surface of said second annular shaped member,

e) whereby securing the first annular shaped members to the object via the two or more holes precludes axial rotation of the bolt so as to permit tightening of said nut, and the subsequent securing of the second annular shaped members to the object via the one or more holes prevents the nut from reversing direction to either loosen the grip on the object or unthread from the shaft.

[c33] A fastening system according to claim 32 wherein at least one of said first and second annular members further has said holes equally spaced about the periphery of the circular bore between the edge of the fastener and said cavity.

[c34] (cancelled)

[c35] A fastening system according to claim 32 wherein ~~the~~ said ribs taper in thickness from the portion of the plate adjacent to said cavity toward the thinner peripheral region adjacent each of said holes.

[c36] A method of fastening a first structure to a second structure, the method comprising:

a) providing one or more holes that traverse an overlapping area of the structures to receive a cylindrical shaft, the shaft having a threaded end and a non-circular bolt end,

b) providing a first and second annular washer having:

i) a substantially planar lower surface,

ii) an upper surface opposing the lower surface,

iii) a polygonal shaped cavity of uniform lateral cross-section extending downward toward the lower surface of the washer for receiving in mated engagement a non-circular portion of a bolt selected from the group consisting of a bolt head and a nut,

iv) a circular bore extending upward from said lower surface to penetrate a portion of said central cavity, being co-axially disposed thereto such that the non-circular portion of a bolt is retained in said cavity with the shaft of the bolt extending through said circular bore,

v) a peripheral region disposed between the edge of the washer and the central bore wherein said peripheral region of the washer is thinner than the portion of the washer adjacent said cavity,

vi) two or more holes disposed in said peripheral region extending between the upper and lower surface to secure the washer to an object in contact with the lower surface thereby preventing rotation about said circular bore,

vii) each of said holes being separated from an adjacent hole by a rib,

c) placing the first annular washer on the shaft, such that the bolt head engages within the central cavity thereof,

d) inserting the shaft through the hole such that the flat face of the washer is adjacent the outer surface of the first structure with the threaded end extending to protrude from the second structure,

e) securing the first washer to the first structure by inserting a nail or screw through one or more of the holes to prevent rotation about the shaft,

f) inserting a second annular washer onto the threaded shaft, the flat face disposed toward the second structure,

g) threading a nut onto the shaft as the non-circular head locks into the cavity of the first washer to prevent rotation of the threaded bolt,

h) rotating the nut to advance it toward the fastener to urge the flat face of the second annular washer against the second structure, such that both the first and second washer grasp and compress the first and second structure.

[c37] The method of claim 36 further comprising the step of securing the second annular washer to the second structure by inserting a nail or screw through one or more of the holes to prevent rotation about the shaft.

[c38] The method of claim 36 wherein at least one of the first and second washer has said holes equally spaced about the periphery of the circular bore between the edge of the washer and said cavity.

The following is an examiner's statement of reasons for allowance: in the context of the claimed invention, the prior art does not disclose the shape of the washer in particular the ribs provided between the holes.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Flemming Saether whose telephone number is 571-272-7071. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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